

REMARKS

*Claim Objections*

The Examiner has indicated that the numbering of the claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution.

“When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).”

The claims which followed original claim 79 were not numbered consecutively as required because claim numbers 77, 78, and 79 were used twice. Applicants have corrected the numbering of the twelve claims which follow original claim 79 and their claim dependencies, where appropriate.

Reference to claims greater than original claim 79 below, are as renumbered by Amendment or would have been renumbered, if not canceled.

*Allowable Subject Matter*

**Claims 33-38, 41-48, 50-53, 73, 74, 76, 77, 79 and 80 are allowed.**

The Applicants appreciate the Examiner's diligence and allowance of claims 33-38, 41-48, 50-53, 73, 74, 76, 77, 79 and 80 based on the claimed elements in combination with the allowable subject matter indicated by the Examiner.

**Claims 2-4, 8, 14, 16-19, 30, 55, 62, 64, 71, 82, 84, 86 and 91 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

The Examiner indicates in the Office Action of December 10, 2004, (hereinafter the “Office Action”) that claim 2 contains allowable subject matter. The allowable subject matter of claim 2 has been rewritten into claim 1, and claim 2 has been canceled.

With respect to claims 3, 4, 8, and 14, these dependent claims depend from now allowable claim 1 and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim unobvious combinations thereof.

The Examiner indicates in the Office Action that claim 16 contains allowable subject matter. The allowable subject matter of claim 16 has been rewritten into claim 15, and claim 16 has been canceled.

With respect to claim 18, this claim dependency has been changed to properly depend from claim 15.

With respect to claims 17-19 these dependent claims depend from now allowable claim 15 and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim unobvious combinations thereof.

The Examiner indicates in the Office Action that claim 30 contains allowable subject matter. The allowable subject matter of claim 30 has been rewritten into claim 29, and claim 30 has been canceled.

The Examiner indicates in the Office Action that claim 55 contains allowable subject matter. The allowable subject matter of claim 55 has been rewritten into claim 54, and claim 55 has been canceled.

With respect to claim 62 this dependent claim depends from now allowable claim 54 and is believed to be allowable since it contains all the limitations set forth in the independent claim from which it depends and claims unobvious combinations thereof.

The Examiner indicates in the Office Action that claim 64 contains allowable subject matter. This allowable subject matter of claim 64 has been rewritten into claim 63, and claim 64 has been canceled.

The Examiner indicates in the Office Action that claim 71 contains allowable subject matter. This allowable subject matter of claim 71 has been rewritten into claim 70, and claim 71 has been canceled.

The Examiner indicates in the Office Action that claim 82 contains allowable subject matter. This allowable subject matter of claim 82 has been rewritten into claim 81, and claim 82 has been canceled.

With respect to claim 84 this dependent claim depends from now allowable claim 81 and is believed to be allowable since it contains all the limitations set forth in the independent claim from which it depends and claims unobvious combinations thereof.

The Examiner indicates in the Office Action that claim 86 contains allowable subject matter. The allowable subject matter of claim 86 has been rewritten into claim 85, and claim 86 has been canceled.

The Examiner indicates in the Office Action that claim 91 contains allowable subject matter. The allowable subject matter of claim 91 has been rewritten into claim 90, and claim 91 has been canceled.

The Examiner indicated that claims 5, 6, 9, 10, 12, 23, 24, 26, 39, 40, 49, 56, 57, 59, 60, 61, 67, 68, 75 and 78 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

With regard to claims 5, 6, 9, 10, 12, 23, 24, 26, 39, 40, 49, 56, 57, 59, 60, 61, 67, 68, 75 and 78, as will be explained below, the rejections are moot and the claims allowable.

#### ***Claim Rejections - 35 USC §112***

**Claims 5, 6, 9, 10, 12, 23, 24, 26, 39, 40, 49, 56, 57, 59, 60, 61, 67, 68, 75 and 78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Regarding claims 9, 23, 39, 59, 67 and 75, the Examiner states:

“Claims 9,23,39,59,67 and 75 recite terms "Z<sub>ave</sub>", "C" and Z<sub>exp</sub>" but fails to define their meanings.”

It is respectfully submitted that the case law holds what is described in the specification is considered part of the claimed limitations where defined terms, such as " $Z_{ave}$ ", "C" and  $Z_{exp}$ ", are involved.

In the case of All Dental Prodx, LLC v. Advantage Dental Products, Inc., 309 F.3d 774 (Fed Cir. 2002), the appeal centered on the claim term, "original unidentified mass," which the lower court concluded did not meet the requirements of the first and second paragraphs of 35 USC §112. The CAFC adopted the same claim construction of the lower court but held that the claim term was properly described in the specification and was definite and clear in the claim as a result.

Regarding claims 12, 26, 49, 61 and 78, the Examiner states:

"Claims 12,26,49, 61 and 78 recite terms such as " $Y_{ave}$  [b4]" but fails to define their meanings."

As explained above the case law holds what is described in the specification is considered part of the claimed limitation where defined terms, such as " $Y_{ave}$  [b4]", are involved. All Dental Prodx, LLC v. Advantage Dental Products, Inc., *supra*.

Regarding claims 5 and 56, the Examiner states:

"Claims 5 and 56 recite terms  $\sigma_x$  and  $\sigma_y$ , that are not defined."

As explained above, the case law holds what is described in the specification is considered part of the claimed limitation where defined terms, such as " $\sigma_x$  and  $\sigma_y$ ", are involved. All Dental Prodx, LLC v. Advantage Dental Products, Inc., *supra*.

Regarding claims 6, 10, 24, 40, 57, 60 and 68, the Examiner states:

"Claims 6,10,24,40,57, 60 and 68 are rejected for the same reason for their respective dependence on rejected claims."

It is respectfully submitted that claims 6, 10, 24, 40, 57, 60 and 68 depend from claims that are allowable under 35 USC §112, first and second paragraphs.

***Claim Rejections - 35 USC §102***

**Claims 15, 32 and 63 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al (US 5,602,601, hereinafter “Kim”).**

Based on the amendments to claims 15 and 63 to include allowable subject matter and the cancellation of claim 32, the rejections are now moot.

***Claim Rejections - 35 USC §103***

**Claims 1, 7, 11, 13, 20-22, 25, 27-29, 31, 54, 58, 65, 66, 69, 70 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 5,602,601, hereinafter “Kim”) in view of Pottinger et al (US 4,918,708, hereinafter “Pottinger”).**

Based on the amendments to claims 1, 29, 54, and 70 to include allowable subject matter, the dependency of claims 7, 11, 13, and 58, and cancellation of claims 20-22, 27-28, 31, 65-66, 69, and 72, the rejections are now moot.

**Claims 81, 83, 87-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 5,602,601, hereinafter “Kim”) in view of Pottinger et al (US 4,918,708, hereinafter “Pottinger”) and Gatherer (US 6,560,294, hereinafter “Gatherer”).**

Based on the amendments to claims 81, 83, and 90 to include allowable subject matter and cancellations of claims 87-89, the rejections are now moot.

**Claim 85 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 5,602,601, hereinafter “Kim”) in view of Gatherer (US 6,560,294, hereinafter “Gatherer”).**

Based on the amendment to claim 85 to include allowable subject matter, the rejections are now moot.

The other references cited by the Examiner showing the prior art have been considered and are not believed to disclose, teach, or suggest, either singularly or in combination.

*Conclusions*

In view of the above, it is submitted that the claims are in condition for allowance and reconsideration of the rejections is respectfully requested. Claims 33-38, 41-48, 50-53, 73, 74, 76, 77, 79 and 80 have been allowed. Allowance of claims 1, 3-15, 17-19, 29, 39-40, 49, 54, 56-63, 70, 75, 78, 81, 83-85, and 90 at an early date is solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including any extension of time fees, to Deposit Account No. 50-0374 and please credit any excess fees to such deposit account.

Respectfully submitted,



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